

***FY98 Section 105 State and Tribal Assistance Grant
Request for Proposal:
Quantifying the Emission Benefit of Opacity Testing and Repair***

I. Project Description

States have been concerned about and expressed interest in the contribution of heavy-duty highway vehicle emissions to state emission inventories. A number of states are conducting or investigating the use of heavy-duty highway smoke opacity testing programs for the control of particulate matter emissions. The purpose of this project is to quantify the emission benefit of opacity testing and repair using the J1667 smoke opacity test. The results can be used by the states to help determine: 1) whether a smoke opacity testing program should be implemented as part of a state's control strategy for particulate matter (PM) and possibly other pollutants, and 2) the overall usefulness of smoke measurements in estimating PM emissions.

Heavy-duty diesel vehicles, with emphasis on vehicles greater than 19,500 lb GVW (i.e., classes 6-8) are targeted for this project. Those with opacity levels above a specified cutpoint would be solicited for testing. For example, the opacity cutpoints currently recommended by the SAE Cooperative Research Program are 40% for vehicles 1991 or newer and 55% for vehicles 1990 and older. What follows is one possible method to quantify the emission benefit of opacity testing and repair; however, applicants are welcome to propose alternative methods. Repair checks would be performed on each candidate vehicle. If it is determined that repairs can be made within reasonable cost limitations, the vehicle would be selected for dynamometer testing. Dynamometer testing prior to repair would be conducted on each vehicle using one or more transient driving cycles under representative load. At a minimum, regulated emissions of HC, CO, NO_x, and particulate matter would be measured. Repairs would then be conducted on each vehicle. After repair, the J1667 test and emissions tests would be repeated to determine the emission benefit of repair. A final report would also be prepared and the test data would be available in electronic form.

Of particular interest are the test procedures; test equipment; repair checks and repairs that will be performed; the cost limit imposed for repairs; fuel(s) that will be used, method for vehicle solicitation; where the vehicle sample will be obtained; the number and mix of targeted vehicles; the pollutants that will be measured; how the results will be used to quantify benefits (i.e., the analysis method) and the timeframe for completion of the project.

II. Deadline

The deadline for submitting proposals (original and six copies) is September 11, 1998. Proposals should be sent to:

Penny Carey
U.S. EPA (AMD)
2000 Traverwood Drive
Ann Arbor, MI 48105
(Phone) 734-214-4355 (Fax) 734-214-4939
(Email) carey.penny@epa.gov

[Note: Proposals may be faxed or sent via email, but must be followed by a hard copy original.]

III. Funding Issues

One grant will be awarded, with the amount of available funding not to exceed \$270,000. If a proposal with a 2-year project period is submitted, the budget and cost estimate should be designed to indicate what will be accomplished in each of the first and second years. The competition process will be managed by OMS. The selected proposal will be awarded by the appropriate EPA Regional office and funded through Section 105 authority.

Clean Air Act Section 105 mandates that eligible agencies provide matching funds of at least 40%. Therefore, if an air pollution control agency submits a proposal for which they do not already have matching funds, they must include a statement in their proposal indicating that the match could be met if their proposal is selected. Organizations unable to meet a required match will be considered ineligible. (This requirement does not apply to multi state organizations.) Organizations which are unclear as to their matching status are recommended to contact their EPA Regional Grant Coordinator.

IV. Eligible Organizations

Proposals can be accepted from multi state organizations, collaborations of air pollution control agencies, and state and local air agencies (individual agencies will be considered so long as the project to be undertaken will have replicability to other communities nationally.) The selected project will be awarded through the appropriate EPA regions or multi state organization.

V. Criteria for Selection

Proposals will be evaluated based on the following criteria:

- Qualifications and previous experience in smoke testing and dynamometer emission testing of heavy-duty vehicles and heavy-duty engine technology
- Program design/technical approach (including ability to capture an adequately diverse cross-

section of the heavy-duty fleet)

- Analysis method
- Creativity and innovation (consideration of issues; including aspects not specifically identified in RFP)
- QA/QC procedures
- Ability to handle, process, and transfer test data
- Project funding (appropriate levels of funding)
- Project time frame
- Communication plan (progress reports, draft and final reports, other)

VI. Content of Proposal

Proposals should include: background, project summary, description of specific actions to be undertaken (including estimated time line for each task), associated work products, description of project benefits, estimated budget (including estimated cost for each task), time frame for project from initiation through completion, project contacts and any other relevant information to assist in the selection process. Please note that submission of a proposal does not guarantee funding. Only the selected organization will be required to submit a complete EPA grant application package to the appropriate EPA Regional Office.

Allocation of funds will depend ultimately on quality and merit of proposals.

VII. OMS Contacts

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